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AbstractBook

correlates with the extent of osteoarticular destruction (fibronectin level 561±65.0, fibronectin antibodies 0.124±0.016 absorbance units).

Conclusion: By means of enzyme immunoassay using an immobilized magnetocontrollable sorbent we detected fibronectin antibodies whose level correlated with the stage and course of disease.

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IDENTIFICATION OF VERTEBRAL FRACTURES IN PATIENTS WITH RHEUMATOID ARTHRITIS USING BONE MINERAL DENSITY AND TRABECULAR BONE SCORE

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Objective: Bone involvement is the main joint complication of rheumatoid arthritis (RA). Patients with RA have a greater risk of osteoporosis (OP) and of fracture than the general population. The prevalence of osteoporosis in RA is 20-30% in the spine and 7-26% in the hip. The diagnosis of OP is based on BMD. The main limit of the latter lies in the overlap of BMD values between fractured subjects and unfractured subjects. The trabecular bone score (TBS) is an indirect measurement of bone microarchitecture. Work has shown that a TBS low is correlated with the presence of fracture and this regardless of the outcome of the BMD. The aim of our work is to demonstrate the role of TBS in predicting fracture risk in patients with RA.

Methods: This is a retrospective type case study conducted at the level of at the level of the rheumatology department of the University Hospital of Tizi Ouzou concerning women with RA. 167 women with RA according to the ACR criteria were recruited at the BMD unit as part of the routine procedure. The questionnaire included a clinical assessment of demographic data (age, weight, height, BMI, duration of illness, corticosteroid dose, age of menopause). The activity of the disease by the DAS28, the health assessment question (HAQ) for the quality of life as well as the different basic and biological treatments taken. A radiological evaluation by the search for vertebral fracture (VF) using the VFA tool (vertebral fracture assessment) of T4-L4. The evaluation was performed qualitatively and semiquantitatively according to the Genant classification. BMD was measured by DXA (Hologic) at the lumbar and femoral spine. TBS was evaluated in the same measurement regions (L1-L4) as those used for BMD, using TBS iNsight® V1.0 (Med-Imaps).

Results: 25 patients with VF (case) were identified and 142 without VF (controls). Cases were older, had a higher DAS28, a more impaired HAQ and a duration of higher menopause than controls ($p<0.001$). The BMD and the TBS were lower in cases vs. controls ($p<0.001$). Comparing TBS coupled to BMD vs. BMD alone, according to a logistic regression model, it appears that the area under the curve (AUC) of the association lumbar BMD + TBS=0.74 (0.65-0.83) vs. AUC of BMD alone=0.61 (0.49-0.72) and that TBS + BMD femoral neck=0.84 (0.77-0.90) vs. AUC of the TBS alone=0.74 (0.65-0.84). The determination of the diagnostic threshold value of TBS (corresponding to the TBS value having a better sensitivity and specificity) by the Youden index is 0.424 corresponding to a TBS value of 1.148 (with a sensitivity of 70% and a specificity of 72%).

Conclusion: TBS in RA, supplemented or not with BMD, has diagnostic value and this whatever the densitometric zone on patients matched or not for age and or at the DMO. Its use in clinical routine should be promoted to improve the care of our patients.

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PREVALENCE OF GENU VARUM/VALGUM IN ALGERIAN CHILDREN AND ADOLESCENTS WITH LOW VITAMIN D AND CALCIUM STATUS

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Objective: The prevalence of lower extremity deformities is high in some areas of the world, often associated with low vitamin D status and low calcium intake. These bone deformities are physiological until the age of five. There is no published data on bone deformities in the lower limbs of healthy children living in North Africa.

Methods: We evaluated the prevalence of bone deformities and other clinical parameters, vitamin D status, calcium intake, calcium, phosphorus and alkaline phosphatase in 435 children aged 5-15 years old.

Results: There were bone deformities of the lower limbs in 72 children, a prevalence of 16.6%. Compared to the other 363 children without bone deformities, they have several potential risk factors for hypovitaminosis D. They also had lower 25OHD concentrations as well as elevated levels of PTH and alkaline phosphatase.

Conclusion: Low vitamin D status during winter associated with other potential risk factors such as low calcium intake, dark phototype, high BMI, poor living conditions are associated with increased risk of genu varum/valgum in healthy children and teenagers living in Algeria.